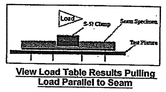
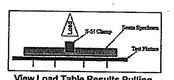
How Strong is S-5!?



View Load Table Results Pulling Load Parallel to Seam



View Load Table Results Pulling Load Normal to Seam

Load Test Results (Normal to Seam) This page shows our current list of Load Test Results. Scroll down the page to review all the results. You can also filter test results by Manufacturer. Choose from the "Manufacturers" menu to display the desired load test results.

Panel Manufacturer: Butler | Product: All...

Units: ◉SAE ○Metric | Safety Factor: 3 | Reset/Test Results

Model	Panel Manufacturer	Panel Name	Thickness Material	Screw Tension (inch-lbs)	Ultimate (lbs)	Failure Mode	Allowable (lbs)	Notes
S-5-E Mini	Butler	MR24	24 ga steel	115	2252 lb	A/B	751 lb	
S-5-U Mini	Butler	MR24	24 ga steel	115	2297 lb	C/D	766 lb	

Notes

1. CAUTION: Note screw tension to avoid damage to this profile.
2. CAUTION: These are cap-seam type profiles.
   The cap of this profile should be mechanically fastened to the seam somewhere along its length with one lap tek.
3. SINGLE FOLD: These profiles are seamed to 90 degrees.
4. ATTENTION: The dimensioning on these seams is such that the clamp will not slip over the seam. Some hand crimping at the clamp location will resolve this problem.
5. ATTENTION: Two piece clamp utilizes two M8 bolts, not setscrews
6. ATTENTION: Two piece clamp utilizes one M8 bolt, not setscrews

Load Testing Normal to Seam

This table represents ultimate and allowable tensile loads applied to the clamp in a negative load direction normal to the panel seam. Please note that this protocol isolates failure to the clamp-seam connection. It is possible that in an actual construction assembly some other mode of failure may occur at lower loads than those produced with this protocol. Loads imposed on the S-5!® clamps will be transferred to the panels and their attachment. Panel seams must have sufficient flexural strength to carry these loads when clamp is used mid-span. Panel attachment and building structure must also be sufficient to carry these loads. The makers of S-5!® clamps make no representations with respect to these variables. It is the responsibility of the user to verify this information, or seek assistance from a qualified design professional, if necessary.

Allowable loads are listed utilizing a default Factor of Safety (FS) = 3.0. Actual factor of safety is the responsibility of the designer and should be employed as appropriate. Enter desired Factor of Safety and reset/re-tabulate.

All tabled values are dependent upon setscrew tension. Load testing of S-5!® clamps is conducted with setscrews tensioned at 150 inch pounds (22 gauge steel profiles) or 115 inch pounds (24 gauge steel and all other metals). When relying upon published load values, setscrews should be tensioned and verified using a calibrated torque wrench between 160 and 180 inch pounds when used on 22 ga steel and between 130 and 150 inch pounds for all other metals and thinner gauges of steel.

Load Test Results (Parallel to Seam) This page shows our current list of Load Test Results. Scroll down the page to review all the results. You can also filter test results by Manufacturer. Choose from the "Manufacturers" menu to display the desired load test results.

Panel Manufacturer: Butler | Product: All...

Units: ◉SAE ○Metric | Safety Factor: 2 | Reset/Test Results

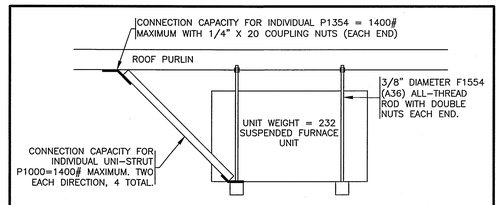
Model	Panel Manufacturer	Panel Name	Thickness Material	Screw Tension (inch-lbs)	Ultimate (lbs)	Failure Mode	Allowable (lbs)	Notes
S-5-U	Butler	Goosis 360	24 ga steel	115	1124 lb	B	562 lb	
S-5-E	Butler	MR24	22 ga steel	150	1892 lb	B/C	946 lb	
S-5-E	Butler	MR24	24 ga steel	115	1468 lb	B/C	734 lb	
S-5-U	Butler	MR24	24 ga steel	115	2114 lb	B	1057 lb	
S-5-U	Butler	VSR	24 ga steel	115	1936 lb	B/F	968 lb	

Notes

1. CAUTION: Note screw tension to avoid damage to this profile.
2. CAUTION: These are cap-seam type profiles.
   The cap of this profile should be mechanically fastened to the seam somewhere along its length with one lap tek.
3. SINGLE FOLD: These profiles are seamed to 90 degrees.
4. ATTENTION: The dimensioning on these seams is such that the clamp will not slip over the seam. Some hand crimping at the clamp location will resolve this problem.
5. ATTENTION: Two piece clamp utilizes two M8 bolts, not setscrews
6. ATTENTION: Two piece clamp utilizes one M8 bolt, not setscrews

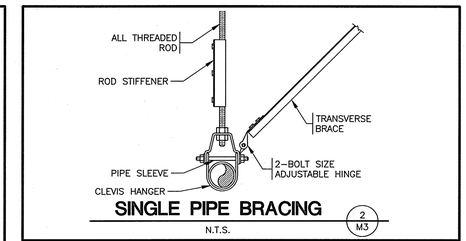
This table represents tensile loads applied to the clamp in a direction parallel to the panel seam. Panels must be adequately attached to the structure at their point of fixity to resist these loads. Allowable loads are listed utilizing a default Factor of Safety (FS) = 2.0. Actual factor of safety is the responsibility of the designer and should be employed as appropriate. Enter desired Factor of Safety and reset/re-tabulate.

All tabled values are dependent upon setscrew tension. Load testing of S-5!® clamps is conducted with setscrews tensioned at 150 inch pounds (22 gauge steel profiles) or 115 inch pounds (24 gauge steel and all other metals). When relying upon published load values, setscrews should be tensioned and verified using a calibrated torque wrench between 160 and 180 inch pounds when used on 22ga steel and between 130 and 150 inch pounds for all other metals and thinner gauges of steel.



SEISMIC FURNACE BRACING DETAIL

N.T.S. (3 / M3)



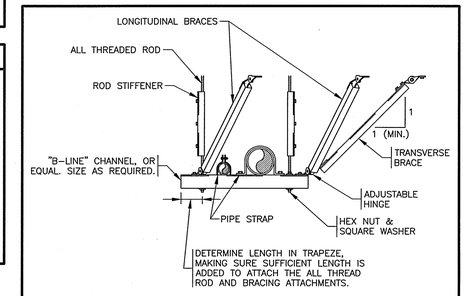
SINGLE PIPE BRACING

N.T.S. (2 / M3)

SEISMIC RESTRAINT

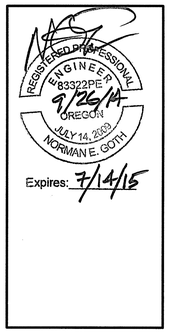
TRANVERSE BRACING WITH CONCRETE ATTACHMENTS OR STRUCTURAL STEEL ATTACHMENTS AS REQUIRED, SHALL BE USED FOR THE FOLLOWING:

1. ALL PIPE 1" INSIDE DIAMETER AND LARGER SUSPENDED MORE THAN 12" BELOW STRUCTURE.
2. ALL PIPING IN THE MECHANICAL ROOM 1-1/4" INSIDE DIAMETER AND LARGER SUSPENDED MORE THAN 12" BELOW STRUCTURE.
3. ALL OTHER PIPING 2-1/2" INSIDE DIAMETER AND LARGER SUSPENDED MORE THAN 12" BELOW STRUCTURE.
4. ALL RECTANGULAR AIR DUCTS WITH CROSS SECTIONAL AREA OF 6 SQUARE FEET OR LARGER SUSPENDED MORE THAN 12" BELOW STRUCTURE.
5. ALL PIPING WHICH REQURES RESTRAINT PER THE ABOVE SHALL BE PROVIDED WITH SEISMIC EXPANSION DEVICES.



TRAPEZE TRANSVERSE AND LONGITUDINAL BRACING

N.T.S. (1 / M3)



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REVISION DATE: